selected dependent upon the calculated value. The method and apparatus further includes determining whether or not a variation of the calculated value has exceeded a predetermined threshold, newly selecting another pseudo-random number sequence used for the step of scrambling if it is determined that the variation of the calculated value has exceeded the predetermined threshold value, and re-scrambling the input main data unit based on the newly selected pseudo-random number sequence. --

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REMARKS

Claims 1-36 are pending in the application. Favorable reconsideration of the application, as amended, is respectfully requested.

The drawings have been amended to include the label "Prior Art" in Figs. 18-24B as requested by the Examiner. In addition, the abstract has been revised to improve readability. The summary of the invention has been condensed per the Examiner's request.

I. ALLOWABLE SUBJECT MATTER

Applicants note with appreciation the indicated allowability of claims 4, 5, 11 and 12 subject to being amended to independent form.

II. CLAIM REJECTIONS

Claims 1-3, 6-10, 13-22, 29, 31, 33 and 35 stand rejected under 35 USC §103(a) based on applicants' admitted *Prior Art* (Figs. 18-27) in view of *Sinjou et al.* Claims 23-28, 30, 32, 34 and 36 stand rejected under 35 USC §102(b) as being anticipated by the admitted *Prior Art*. Applicants respectfully traverse these rejections for at least the following reasons.

The Examiner contends that Fig. 18 of the admitted *Prior Art* discloses the claimed invention except for the selection of another pseudo-random number sequence which depends upon a predetermined threshold, and a re-scrambling step.

However, the Examiner contends that *Sinjou et al.* discloses monitoring the DSV control signal. The Examiner states that if the DSV control signal is conformed to a predetermined criterion the information signal is outputted at 8. If not, the information signal is re-scrambled through 5.

a. Claims 1-3, 6-10 and 13-22

Applicants agree that the admitted *Prior Art* does not disclose re-scrambling the input main data by selecting another pseudo-random number sequence as recited in claims 1, 8, 15, 17, 19 and 21. However, *Sinjou et al.* does not make up for these deficiencies in the admitted *Prior Art*. *Sinjou et al.* does not teach or suggest *re-scrambling* the data by selecting another pseudo-random sequence as recited in claims 1, 8, 15, 17, 19 and 21, contrary to the position taken by the Examiner.

More specifically, *Sinjou et al.* teaches that DSV correction scrambling is selectively performed on those parts of the input data which have a DSV which does not comply with a predetermined criteria. (Column 4, lines 33-36). Otherwise, no such scrambling is performed. In that sense, *Sinjou et al.* either scrambles data or does not scramble data depending on the DSV. This must be contrasted, however, with the claimed technique of *re-scrambling* data by selecting another pseudo-random sequence. The present invention scrambles the data, and then re-scrambles the data should it be necessary based on the DSV. *Sinjou et al.* either scrambles the data or does not scramble the data.

Furthermore, *Sinjou et al.* teaches using a DC-free code such as and "Eight to Fourteen" modulator (EFM) as a premise. Using such an EFM code, the DSV will not be diverged although it may vary. Accordingly, scrambling of data encoded by such code is not necessary. *Sinjou et al.* either scrambles the data or does not scramble the data depending on the DSV in order to reduce the low frequency component of a reproduced signal. However, since the DSV is not diverged, it is unnecessary to re-scramble data by selecting another pseudo-random number sequence as recited in claims 1, 8, 15, 17, 19 and 21.

Accordingly, it would not have been obvious to modify the teachings of the admitted *Prior Art* to include a re-scrambling step of data which had be previously scrambled based on the teachings of *Sinjou et al.* *Sinjou et al.* itself does not teach such a re-scrambling. Moreover, based on the teachings of *Sinjou et al.* such a re-scrambling step would not be necessary as the DSV would not be diverged.

In comparing claims 1-3, 6-10 and 13-22 with *Sinjou et al.*, in the claims scrambling of data is a prerequisite, and the DSV may still be diverged even if the data is scrambled. Therefore, it is effective to select another pseudo-random number sequence to re-scramble the data. In *Sinjou et al.*, on the other hand, scrambling of the data is not a prerequisite, and the DSV is not diverged regardless of whether the data is scrambled or not. Therefore, if the data has been scrambled, there is no reason for selecting another pseudo-random number sequence to re-scramble the data. Accordingly, even if the admitted *Prior Art* and *Sinjou et al.* were combined the claimed invention would not result.

For at least the above reasons, the invention of claims 1, 8, 15, 17, 19 and 21 would not have been obvious. Moreover, the claims which depend therefrom can be distinguished for at least the same reasons.

b. Claims 29, 31, 33 and 35

Neither the admitted *Prior Art* nor *Sinjou et al.* teach or suggest the code recording apparatus of claims 29, 31, 33 and 35. For example, claim 29 recites a "recording means for recording the modulated main data together with the scramble data onto a sector on the recording medium". It is not clear from the Office Action where the Examiner feels such feature is taught by either the *Prior Art* or *Sinjou et al.* Nevertheless, applicants respectfully submit that the references taken alone or in combination to not teach or suggest such feature.

Specifically, the *Prior Art* does not disclose a recording device for recording scramble data representing a pseudo-random number sequence together with scrambled data on a recording medium as recited in claim 29. *Sinjou et al.* is constructed so that the same initial value is supplied to a scrambler both during

recording and during reproduction to obtain the same scramble data (see Col. 10, lns. 7-24). Accordingly, *Sinjou et al.* also neither teaches nor is not required to record scramble data representing a pseudo-random number sequence together with scrambled data on a recording medium as in claim 29.

Thus, claim 29 may be distinguished over the teachings of the *Prior Art* and *Sinjou et al.* as neither reference teaches or suggests a "recording means for recording the modulated main data together with the scramble data onto a sector on the recording medium". Dependent claims 31, 33 and 35 can be distinguished for at least the same reasons.

c. Claims 23-28, 30, 32, 34 and 36

Claim 23 relates to a code recording medium on which scramble data representing a pseudo-random number sequence is recorded together with scrambled data. Claim 36 relates to a code reproducing apparatus for reproducing main data from a recording medium having scramble data and scrambled main data.

As was discussed above in connection with claim 29, the *Prior Art* does not teach or suggest recording the modulated main data together with the scramble data onto a sector on the recording medium. Consequently, the *Prior Art* does not teach or suggest a recording medium on which scramble data is recorded together with scrambled data as recited in claim 23. Similarly, the *Prior Art* does not teach or suggest a code reproducing apparatus as recited in claim 36 in which data is reproduced from a recording medium having scramble data and scrambled data.

The present invention relates to an environment in which when another pseudo-random number is selected to scramble data, scrambled data may be recorded together with scramble data representing the pseudo-random number sequence selected in the scrambling on a recording medium. Then, by reading the scrambled data together with the scramble data from the recording medium, the scrambled data can be reproduced based on the pseudo-random number sequence represented by the scramble data. The *Prior Art* does not teach or suggest such an arrangement.

Accordingly, claims 23 and 36 may be distinguished over the *Prior Art* together with dependent claims 24-28, 30, 32 and 34.

Withdrawal of the rejections is respectfully requested in view of the above comments.

III. CONCLUSION

Accordingly, all claims 1-36 are believed to be allowable and the application is believed to be in condition for allowance. A prompt action to such end is earnestly solicited.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should any fees be due as a result of the filing of this response, the Commissioner is hereby authorized to charge the Deposit Account No. 18-0988.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, P.L.L.

Mark D. Saralino
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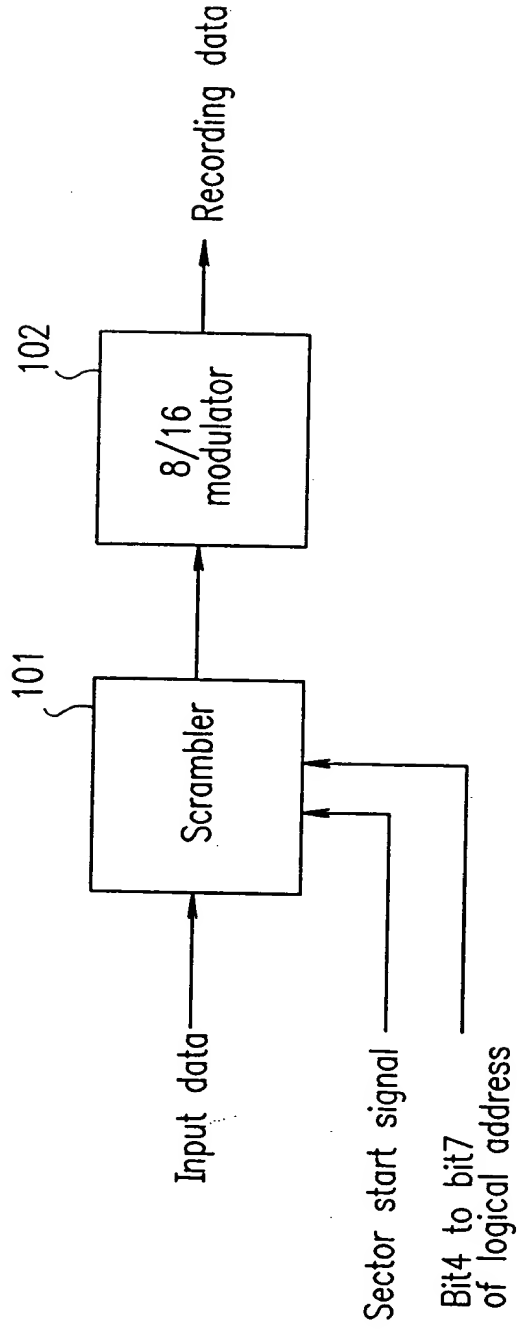
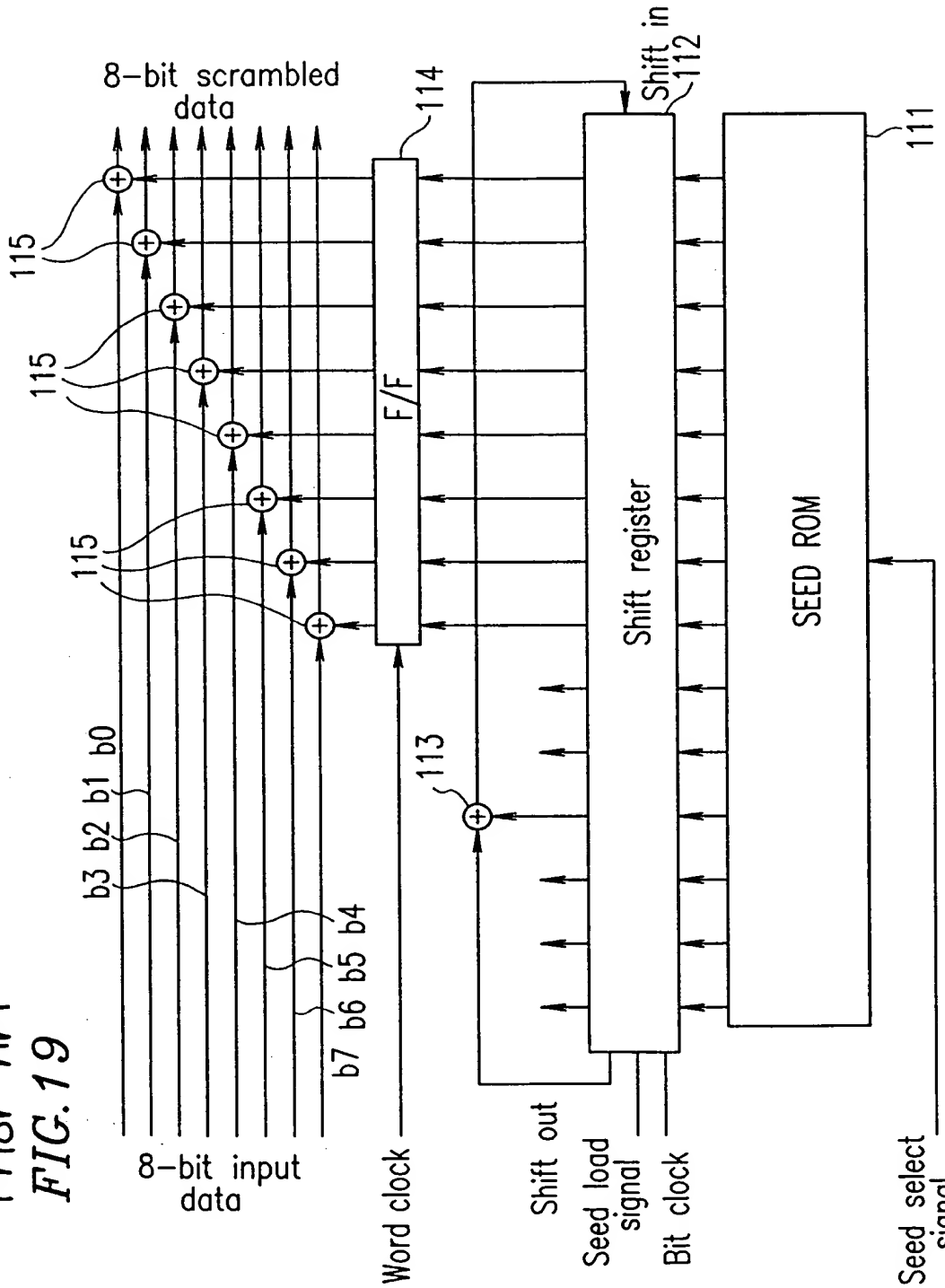
I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.

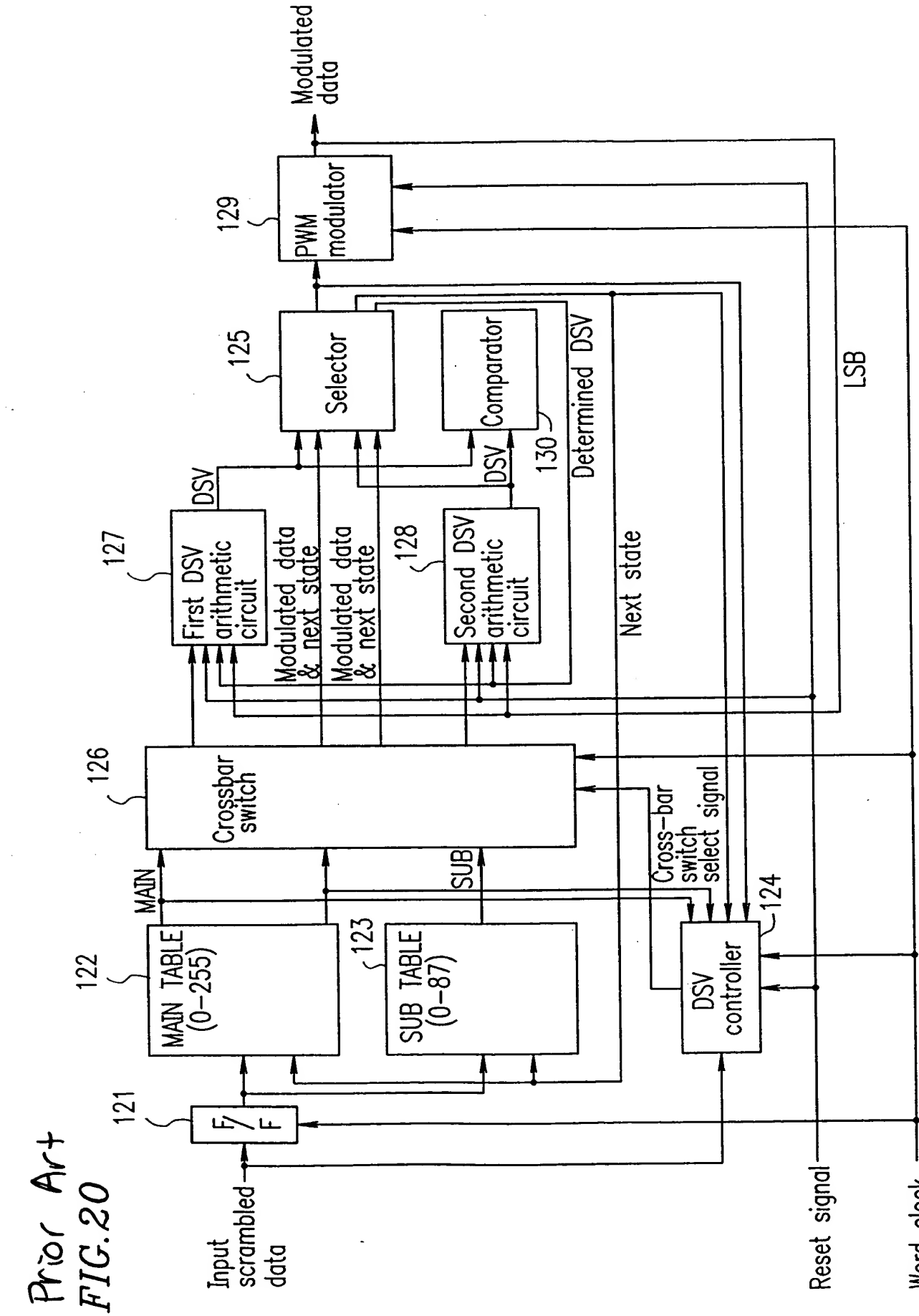
October 2, 1998
DATE



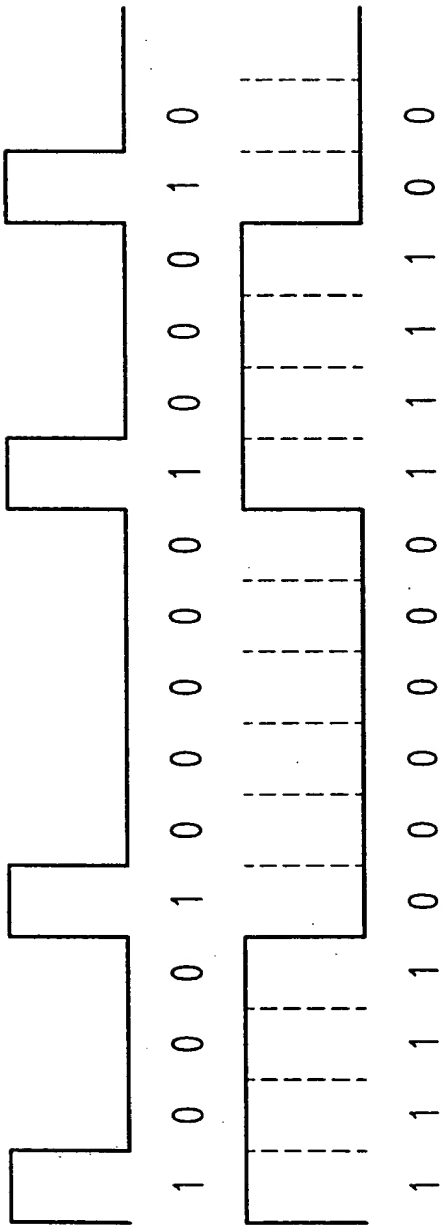
Prior Art
FIG. 18



Prior Art
FIG. 19



Prior Art
FIG. 20

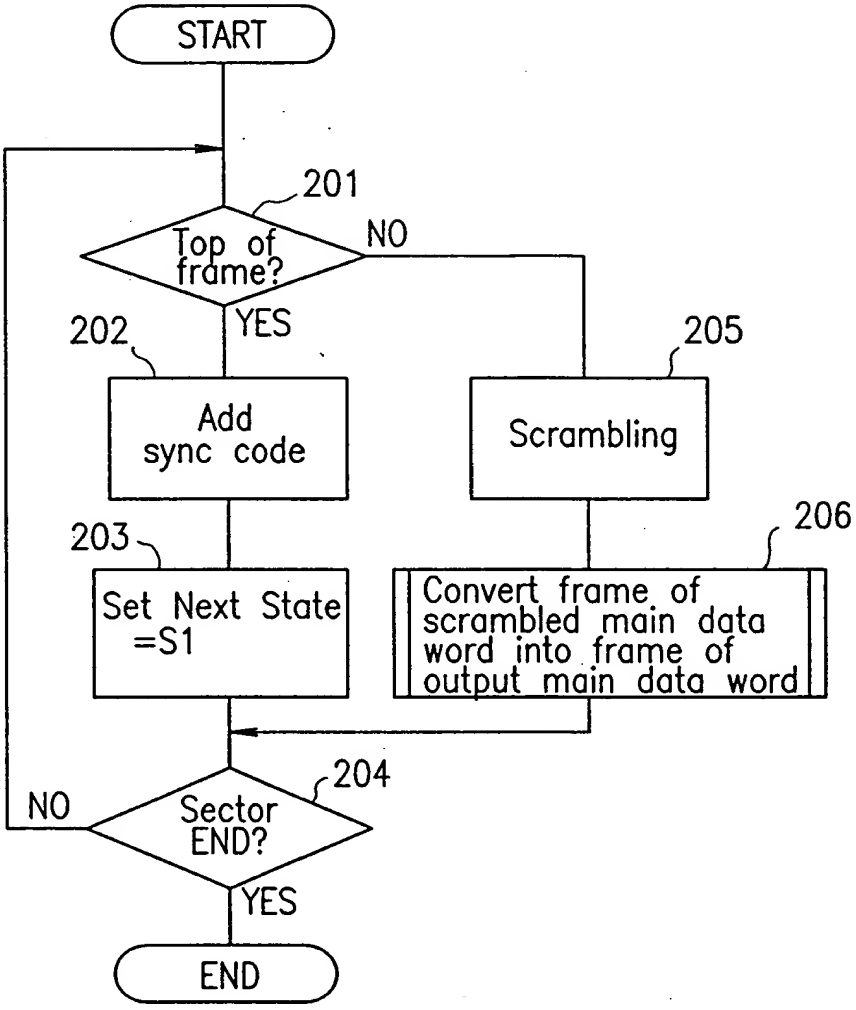


Prior Art
FIG. 21A

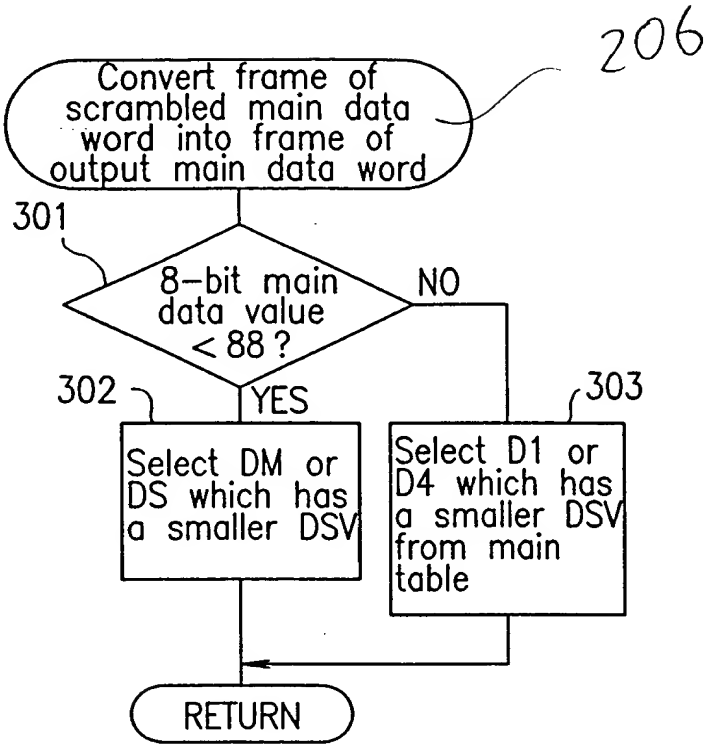
Prior Art
FIG. 21B

Prior Art

FIG. 22

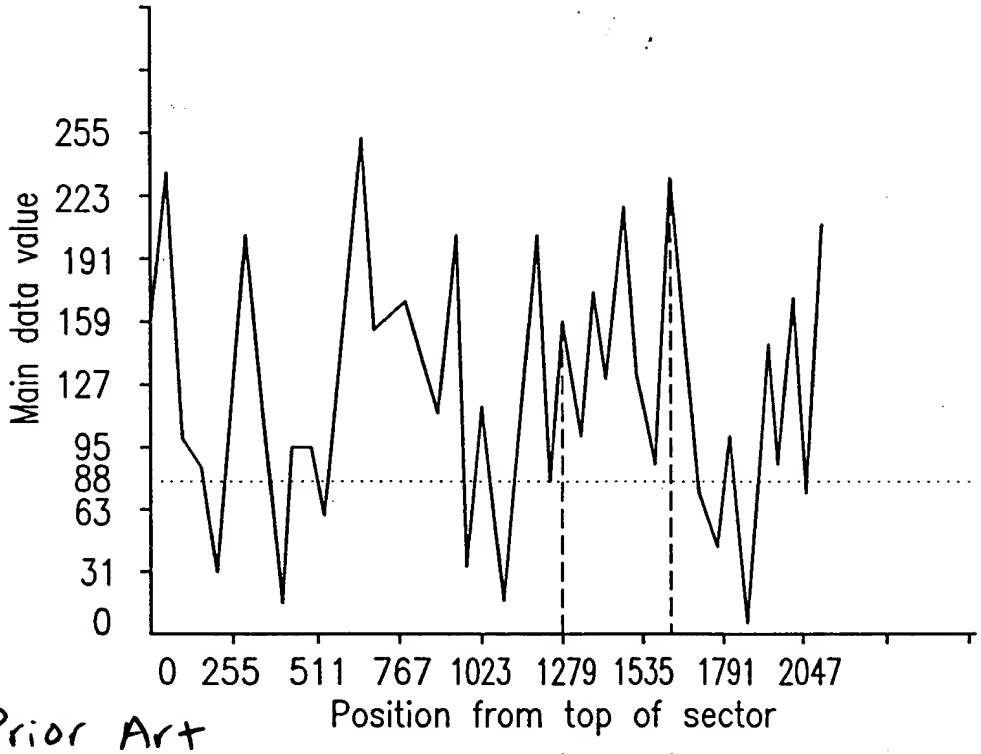


Prior Art
FIG.23



Prior Art

FIG. 24A



Prior Art

FIG. 24B